

SCULPTURAL EXPRESSION
AS RELATED TO THE HUMAN FIGURE

by

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TABLE OF CONTENTS

	Page
STATEMENT OF PURPOSE	1
Premise	1
Plan for Development of Premise	1
INTRODUCTION	2
DEVELOPMENT	8
Choice of Medium	8
Choice of Method	8
Choice of Size	9
Preliminary Experiments	9
1. Man in a Crowd "THE AUDIENCE"	10
2. Man Apart from Man "SEPARATENESS"	11
3. Man and the Universe "IMPOTENCY"	12
4. Man and Fate "THE WHEEL OF FORTUNE"	14
PRESENTATION AND ANALYSIS OF SCULPTURE	17
Man: A Part of a Multitude	17
Observations	18
Sculpture I "EXODUS"	18
Description and Method	18
Man: And the Group	24
Observations	25
Sculpture II "ONE AND OTHERS"	25
Description and Method	25
Man: A Part of an Intimate Group	29
Observations	30
Sculpture III "VIA ALLEGRO"	32
Description and Method	32
Man: Alone with His Environment	36
Observations	37
Sculpture IV "ACCORD"	38
Description and Method	38
TECHNICAL PROCESSES	43
Wax Modelling	43
Materials	43
Method	43
Bronze Casting	44
Materials and Method	44
Finish	46
SUMMARY	47
REFERENCES	51

STATEMENT OF PURPOSE

Premise

My concern in sculpture is not so much with the human figure as it is with the human being - the living organism - man. For me, the expression of this living, breathing creature is to be found in a careful examination of some of his psychological and sociological relationships - man to man, and man to his environment.

Plan for Development

The central problem will be the creation of expressive equivalents for some of these relationships, and having expressed them in a sculptural form, to analyze and isolate the parts of the total form by means of photographs. These photographs may be supplemented by photographs of other artists' work, which, by similarity of purpose and form, illustrate or amplify my own statement.

INTRODUCTION

"The topmost aim of all plastic art," said Goethe, "is to render the dignity of man within the compass of the human form."¹

Many great sculptors, in all parts of the world, both past and present, have concerned themselves with a visual representation of the human figure: alone; with an animal; or in a group. "The sculptor has represented him young and old, nude and clothed, ...has shaped his whole body and parts of it - head, torso, hands; has transformed him into god and devil, angel and satyr; into a symbol of wisdom, folly, might, meekness."²

Henry Moore states that,

In my opinion, long and intense study of the human figure is the necessary foundation for a sculptor. The human figure is most complex and subtle and difficult to grasp in form and construction, and so it makes the most exacting form for study and comprehension. A moderate ability to "draw" will pass muster in a landscape or a tree, but even the untrained eye is more critical of the human figure - because it is ourselves.

Although it is the human figure which interests me most deeply, I have always paid great attention to natural forms, such as bones, shells, and pebbles, etc....³

Matisse, though primarily a painter, is also a sculptor. He says in his Notes of a Painter: "What interests me most is neither still life nor landscape but the human figure. It is through it that I best succeed in expressing the nearly religious

¹Ludwig Curtius, Goethe, Wisdom and Experience, p. 242

²Manfred Keiler, The Art in Teaching Art, p. 193.

³British Council, London, Catalogue for Travelling Exhibition No. 11A, Henry Moore, with excerpts from Notes by Moore.

feeling that I have towards life."⁴

Barbara Hepworth distinguishes three kinds of form that have a particular meaning for her.

The standing form, (which is my translation of my feeling towards the human being standing in landscape); the two forms (which is the tender relationship of one living thing beside another); and the closed form, such as the oval, spherical or pierced form...which translates for me the association and meaning of gesture in landscape; in the repose of say a mother and child, or the feeling of the embrace of living things, either in nature or in the human spirit.⁵

Sculptural expression reflects man's changing position within his environment, and is resolved differently according to the particular culture or time. Sculpture suggesting varying relationships of human beings to one another can be found on the facades of ancient temples in India, China, Central and South America and regions around the Mediterranean. Here, groups of figures carved in stone, on frieze or metope, record the conquests of the time, ceremonies relating to religious rites, or daily activities of the people.

The history of the Western world offers many more examples. The sculpture of ancient Greece, where "man was the measure of all things," depicts an idealized image of man, compounded of the most perfect parts of his form.⁶ During the Middle Ages, a Theo-centric era emphasizing God as everything, man is seen as

⁴Robert Goldwater and Marco Treves, Artists on Art, p. 412

⁵Barbara Hepworth, Carvings and Drawings.

⁶Elizabeth G. Holt, A Documentary History of Art, p. 96. Cicero, De Inventione, II, i, 3: "Nor did he think that he could find all that he wanted for beauty in one body, because nature has not created anything perfect in a simple genus."

insignificant, - a servant and sinner. His image is used to symbolically embellish the Romanesque and Gothic churches and familiarize the illiterate with creed and dogma through biblical scene. During the Renaissance, man emerges once again as an individual with a unique personality. The classical ideal of the human figure is used by the sculptor in accordance with the Renaissance conception of man as the prime object of creation. The nude body in monumental form echoes the canons of style⁷ devised by the sculptors of ancient Greece where man, likewise, had been "the measure of all things." This cult of the individual is reflected in the Davids of Michelangelo, Donatello and Verocchio.

In our day, this emphasis on the unique individual has given way to a changed view of man. Without attempting to ascribe causal relations, one should note that the late nineteenth and twentieth centuries have turned from the Renaissance concept of individualism to that of man as a segment of a collective society. Portraiture has virtually disappeared. Scientific research and technological innovations play a major role in suggesting new and more complex images of man. No single theory guides the sculptor. Working in such diverse materials as stone, wood, bronze,

⁷ Elizabeth G. Holt, A Documentary History of Art, p. 96. Giovanni Pietro Bellori, The Lives of Modern Painters, Sculptors and Architects, 1672. "Zeuxis, who selected five virgins to form the famous image of Helen that is proffered as an example by Cicero in the Orator, teaches the painter and the sculptor alike to keep in mind the Idea of the best natural forms and to make what is most elegant in each. For Zeuxis did not believe that he could find in one body only all the perfections that he sought for the beauty of Helen, because nature does not make any particular thing perfect in all its parts."

aluminum, plastic, iron, steel or wire he conceives the human figure as segmented⁸ or dissected;⁹ stated in geometric¹⁰ or organic form.¹¹ In many instances it is no longer related to human emotions or feelings - but suggests only qualities of the living cell such as motion or energy.¹² In others, it is an abstracted human form portraying symbolically aspects of human experience.¹³

In spite of differing concepts of man as a subject for sculpture, artists of all periods share similar problems in their attempts to transform a mass of inert material into an image representative of a living being.

Rodin says,

Art cannot exist without life. If a sculptor wishes to interpret joy, sorrow, any passion whatsoever, he will not be able to move us unless he first knows how to make the beings live which he evokes. For how could the joy or the sorrow of an inert object - of a block of stone - affect us? Now, the illusion of life is obtained in our art by good modelling and by movement.¹⁴

Valentiner emphasizes the sculptor's role as the vital one here. "It is a mistake to think that the life comes from the

⁸ Cf. Pablo Picasso. Female Head. 1910. Bronze.

⁹ Cf. Umberto Boccioni. Muscles in Motion. 1913. Bronze.

¹⁰ Cf. Alexander Archipenko. Standing Figure. 1920. Hydro-stone.

¹¹ Cf. Jean Arp. Concretion Humaine. 1936. Stone

¹² Cf. Antoine Pevsner. World Construction. 1947. Brass.

¹³ Cf. Alberto Giacometti. City Square. 1948-9. Bronze; and Jacques Lipchitz. Mother and Child. 1941-45. Bronze.

¹⁴ Paul Gsell, Art by Auguste Rodin, p. 66.

material or from the model; it comes only from the maker."¹⁵

Giovanni Bellori says in his book, The Lives of Modern Painters, Sculptors and Architects, written in 1672:

...the emotions are never seen unless in transition and for a few fleeting moments. Thus when the painter or the sculptor undertakes to imitate the workings of the soul, which spring from passions, he cannot see them in the model which poses before him, since it is unable to hold the expression of passion for any length of time....So it is necessary that that artist form for himself an image of them from nature by observing human emotion and associating bodily movements with the emotions of the soul, as they depend reciprocally upon each other.¹⁶

In a letter to Benedetto Varchi in 1549, Benvenuto Cellini talks about form,

...I maintain that among all the arts based on design (i.e. the Fine Arts), sculpture is seven times the greatest, because a statue must have eight show-sides and all should be equally good. Therefore, it often happens that a sculptor lacking in love for his art is so satisfied with one beautiful side or perhaps two; and in order not to have the trouble of filing something from that one beautiful side, which he values above those six sides which are not so beautiful (he leaves it, with the result that) his statue will be devoid of harmony.¹⁷

Henry Moore, in his notes written four hundred years later, in 1937, speaks of this problem of the volume seen from all sides. He says,

(The sculptor) must strive continually to think of, and use, form in its full spatial completeness. He gets the solid shape, as it were, inside his head - he thinks of it, whatever its size, as if he were holding it completely enclosed in the hollow of his hand. He mentally visualises a complex form from all round itself; he knows while he

¹⁵R. G. Valentiner, Origins of Modern Sculpture, p. 27.

¹⁶Elizabeth G. Holt, A Documentary History of Art, p. 102.

¹⁷Ibid., p. 35.

looks at one side what the other side is like; he identifies himself with its centre of gravity, its mass, its weight; he realises its volume, as the space that the shape displaces in the air.

I am very much aware that associational, psychological factors play a large part in sculpture. The meaning and significance of form itself probably depends on the countless associations of man's history. For example, rounded forms convey an idea of fruitfulness, maturity, probably because the earth, women's breasts, and most fruits are rounded, and these shapes are important because they have this background in our habits of perception. I think the human organic element will always be for me of fundamental importance in sculpture, giving sculpture its vitality....My sculpture is becoming less representational ...but only because I believe that in this way I can present the human psychological content of my work with the greatest directness and intensity.¹⁸

From these artists' comments it seems apparent that careful observation of form and movement in living things and in nature, plus a clear understanding of volume and space, are basic essentials for sculpture of vitality.

18

Herbert Read, Henry Moore, Sculpture and Drawings, p. xl, xlii. (originally published in the Listener, 1937)

DEVELOPMENT

The four preliminary works of sculpture and the four completed bronze sculptures presented here for consideration by the graduate faculty, and the written analysis and summary of these works, were undertaken during a seven months sojourn in Europe.

The choice of medium, method and size was largely governed by circumstances directly related to this residence on the continent. Wax models for Sculptures I and II were completed during residence in Munich, Germany; Sculpture IV during residence in Augsburg, Germany, Sculpture III while in Rome, Italy. Sculptures I, II and IV were cast by the Foundry department of the Akademie der Bildenden Künste in Munich under the direction of Herr Ulrich Schonauer. Sculpture IV was cast by the Roman foundry of Giovanni Nicci.

Three factors influenced the selection of bronze as a sculpture medium: first, the availability of excellent and reasonable facilities for casting; second, the lack of any studio or shop space for the debris of stone and wood carving or plaster work; and, third, an interest in cast metal as a sculpture medium which developed during graduate study in sculpture at Kansas State University and was further stimulated by the completion of two experimental works there in cast aluminum.

The particular method employed, i.e., without base core, was one suggested by Herr Schonauer and supplemented by references to Jules Struppeck's description of this modelling method in

The Creation of Sculpture.¹⁹ The bronze sculptures reflect some of the limitations and, it is hoped, advantages of this method.²⁰

The size of the sculpture was relative to the size of the working surface available for modelling in wax (two feet by three feet); the varying costs and available schedules for the foundry work (delivery five to six weeks after receiving model); and the ease of shipment to the United States. In spite of these limitations and the resulting smallness of dimension it was felt that this need not be a restricting factor if both the theme and its artistic statement exhibited qualities of monumentality.²¹

An explanation of the manner in which the original premise was developed seems pertinent here. Which came first, the sculptured form or the sculpture theme? Probably there is no truly adequate answer to such a question.

Undoubtedly, the graduate thesis as a project in creative sculpture gave impetus to the formulation and organization of previously non-verbalized, half-realized feelings into a formal statement of purpose. In the overall title of the thesis, "Sculptural Expression as Related to the Human Figure," one

¹⁹Jules Struppeck, The Creation of Sculpture, pp. 212-216.

²⁰"The candidate would have liked to have had an opportunity to have used a plaster form as the base for casting - perhaps reflecting the numerous textural possibilities and basic solidity of the plaster volume."

²¹Webster's Collegiate Dictionary definition of the word monumental: "5. a work, saying, deed, etc. worthy of record or of enduring." monumental: of the nature of a monument; hence massive and lasting; impressive.

recognizes a fluid field for sculptural expression united with a specific subject area - the human figure.

In the Premise and Plan for Development a closer definition of partially realized conceptions and purpose was presented. However, this was still fluid and broad in nature, being somewhat similar to an artist's commission where some specifications are given, with allowances made for the artist's development of the work according to his own sensibilities.

One might now conclude that, having defined his purpose, the candidate said, "The way is clear! I shall express this. Do this. Add that!" However, the task was much more complex.

The statement of the central problem represented the result of much observation, trial and error, many false starts and corrections before the final confluence of idea and means in the initial and final works.²² Among the sculpture themes developed in three-dimension but rejected for one reason or another were the following four works based on the relationship of man to man:

1. Man in a crowd: "THE AUDIENCE."²³ This wax mock-up, four inches high, consisted of a number of separate groups of seated people. Essentially styled in the same manner, the figures varied from one another in their particular posture. Some sat upright with head erect; others, sprawled

²² Robert G. Scott, Design Fundamentals, p. 147. "...the problems of plastic unity are inseparable from structural problems of weight and stress...a form to serve our purpose cannot be conceived independently of materials and techniques. Real creative imagination means visualizing through material and technical processes.

²³ See Plate 1.

slightly with leg extended or arm resting on the back of pew or bench; still others sat with legs crossed, head inclined or turned. The bodies and benches were at times one and the same. Each bench, seat or pew varied in both length and placement of figures on it. (Two people seated close to each other with an extensive space on one side.) The mock-up was set aside for further exploration when two problems could not be resolved: first, a focal figure for the audience which would not be so dominant or distracting or demigogue-like that the "Audience" quality was lost; second, a means of tying the bench and people units together into a whole.

2. Man apart from man: "SEPARATENESS."²⁴ To suggest this quality, a pair of figures, one male and one female, eight inches in height, were fashioned from wax. The figures were placed on a flat wax base in a position suggesting two people passing one another, absorbed in their own thoughts, unaware of each other. This piece served as an experimental one in defining the particular properties of the wax, i.e., its melting point, structural capacity and modelling qualities.²⁵ It was rejected because both figures seemed

²⁴ See Plate 2.

²⁵ Scott, Design Fundamentals, p. 157. "When we pass from the problems of forming a continuous, homogenous material to those of building up a form out of different parts, the necessity of thinking through the material becomes more acute still. We have to be concerned not only with the shape and structure of each part, but with the problem of joining them together structurally...(Cont'd.)"

top heavy, the legs too short and the bodies ill-defined.

In considering the necessary revisions, it was felt that too much emphasis had been given to the subject matter with too little placed on the sculptural qualities. This over-emphasis was rectified in dealing with the next problem, without abandoning the general theme of man to man, by restating the problem in terms of formal design. Stress was laid on an assemblage of geometric shapes combined on a vertical or horizontal plane with masses and voids placed in such a way as to suggest the theme. This new synthesis of design and subject matter came about as a result of the selective judgment involved in this experiment.

The following were based on a relationship of man to his environment:

3. Man and the universe: "POWERLESSNESS, HELPLESSNESS, IMPOTENCY."²⁶ This wax model, six inches in height, consisted of a group of three emaciated figures in crouching or kneeling positions huddled together with heads turned upward and eyes staring into space. In this instance, the

²⁵ Three-dimensional forms can be thought of, we said, as a diagram of stresses in material. Each part and each joint is doing some kind of work. If the form has been imagined through material rather than imposed on material, each part is properly shaped and adapted to the work it has to do. A good way of getting at this idea is through mechanics. The basic stresses are compression, tension, and shear. Compression means the downward pressure of a load on a supporting member. Tension means pull. Torsion means twisting. Shear is defined as the action of a force 'that causes or tends to cause two contiguous parts of a solid body to slide on each other.' Webster's Collegiate Dictionary."

²⁶ See Plate 3.



Plate 1 "THE AUDIENCE"



Plate 2 "SEPARATENESS"

form suggested the content. Textural experimentation with the wax, such as slashing, scratching, cross-hatching, melting and dribbling resulted in figures with a body surface suggestive of muscle, sinew and bone, and the broken forms and coarse surfaces associated with the effects of modern mechanized violence or the destructive forces of nature.

This sculptured group was rejected as being too immediate and particularized, and therefore too closely associated with recent events in history. It seemed too difficult to achieve the proper restraint that would make this a work of art rather than an instrument of propaganda.

4. Man and fate: "THE WHEEL OF FORTUNE."²⁷ This model in wax was composed of a wheel seven inches in diameter and two figures; one, straddling the top rim, as if temporarily riding it, and the other, crushed and broken beneath it, still clinging to the rungs. The figures were long and attenuated with open coarse texture suggesting muscle tendons. This affect was brought out by melting and dripping the wax. The theme was inspired by remembrance of words from the Opening Chorus in the recording of the opera "Carmina Burana" written by Carl Orff.²⁸

²⁷See Plate 4.

²⁸Carl Orff, "Carmina Burana," 1937. Opening of the third stanza of No. 2: Fortune rota volvitur: descendo minoratus; alter in altum tollitur; nimis exaltatus.

"At the turn of Fortune's wheel,
one is deposed,
Another is lifted on high
to enjoy a brief felicity."

This three-dimensional sketch was rejected for inclusion in the group of completed bronzes. It was felt that the theme had good possibilities for further exploration, but a material more structural than sheet wax seemed advisable for the construction of the wheel. Its two-dimensional character suggested the use of the welding torch for a heavy, massive, but more precise form in steel or a lacy, interwoven pattern of spokes and rim.



Plate 3 "IMPOTENCY"

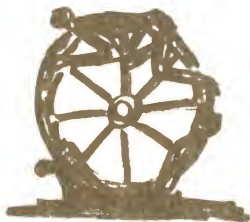


Plate 4 "THE WHEEL OF FORTUNE"

PRESENTATION AND ANALYSIS OF SCULPTURE

THEME I

Man: A Part of a Multitude



Plate 5

SCULPTURE I "EXODUS"

This work is based on the idea of a multitude of people surging forward as if in escape.

Man: A Part of a Multitude

Observations. The human being caught up in a crowd or multitude of other human beings loses his identity as a unique individual.²⁹ He is simply a small segment of a phenomenon larger than himself.³⁰ A crowd of people might be compared to a complex organism pulsating with latent energy or potential power, directed by an outer force or impulse.

Masses of people rarely gather without some singleness of purpose. They react as a whole in spite of minor variations. Witness the massed spectators at a circus, intent on the ring below; the cheering crowds in a sports arena or stadium; the throngs of people pushing and jostling one another for prime positions at the inauguration of an important personage; the mass hysteria of a lynching or uprising.

Sculpture I "EXODUS"

Description and Method. This work is based on the idea of a multitude of people surging forward as if in escape. It was done by means of the cire perdue method of casting in bronze explained in detail under Technical Processes.

It was designed by erecting a vertical plane of wax whose trapezoidal shape formed the backbone or main direction of the sculpture. This plane was cut at the top to reveal rectangular voids with oblique corners angled towards the front or focal

²⁹ Cf. Plate 10. Trsar, Drago "Quattro Gruppi."

³⁰ Cf. Plate 11. Batic, Stojan "Turno I."

point of the sculpture. Two volumes were formed on one side of the central plane by continuing the initial sheet of wax over and around in a swinging curve which turned inwards towards the spine and swung out again in a second curve angling toward the vertical plane. This curved shape was trimmed to suggest the billowing and flow of garments blown by a wind.³¹

To balance this, a secondary geometric mass was assembled on the opposite side of the central axis. This was placed high to suggest lightness or speed. It served as a counter balance to the larger curved shapes and divided the long central plane into a series of changing surfaces and volumes.³²

The outer structural surfaces were then linked together horizontally by means of geometric shapes of wax cut so as to repeat the lines of the outer shell and moulded to form hills and valleys suggestive of bent, rounded backs or rounded chest volumes. A sharp angularity at the edges of the masses was retained to emphasize the active character of the group. Small cube-like wedges representing heads were modelled, turned or twisted to give directional pull or tension to the flat body plane from which each sprang. A small, though definitive, part of the larger whole, these heads, looking forward, downward, sideward, backward, reflect the agitation and energy of the whole group.³³

³¹ Cf. Plates 6, 8, and 9.

³² See Plate 7.

³³ See Plate 5 and 7.

Legs served to lift the entire structure, giving a buoyancy and wing-like quality to the curved areas, defining the edge of the planes, emphasizing the diagonal movements, and giving the lower portion of the sculpture variety in space and volume.

The completed sculpture is a combination of relief and full-round forms suggesting a multitude of people surging forward. They move swiftly in one direction pressing against one another in the disorganized haphazard fashion of flight.



Plate 6



Plate 7



Armitage, Kenneth

Plate 8

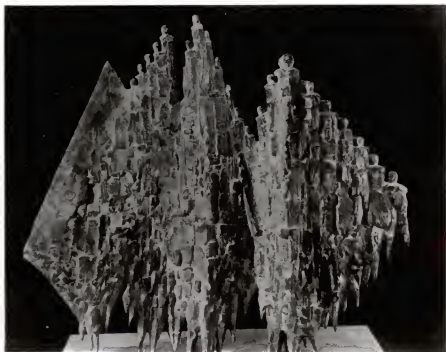
"People in a Wind"



Barlach, Ernst

Plate 9

"The Avenger"



Trsar, Drago

Plate 10

"Quattro Gruppi"



Batic, Stojan

Plate 11

"Turno I"

THEME II

Man: and the Group



Plate 12

SCULPTURE II "ONE AND OTHERS"

This work attempts to express the separateness
of an individual from a group.

Man: And the Group

Observations. A human being may be isolated from a group for brief periods, long periods, a lifetime. His separateness may be internal; based on fear, misunderstanding, feelings of superiority, grief or numerous other factors. It may be external; based on differences of color, race, language or creed. His separateness may be an active or passive condition; something emphasized by the group or ignored.³⁴ In relation to a particular group of people, an individual may feel large, small, dominated, loved, scorned, protected, exposed, judged.³⁵

Sculpture II "ONE AND OTHERS"

Description and Method. This work attempts to express the separateness of an individual from a group.³⁶ It was done by means of the cire perdue method of casting in bronze explained in detail under Technical Processes.

The theme was treated in a manner similar to that of a frieze. On a shallow ground-plane seven figures of the same general rectilinear shape, the same height and size were massed in such a way as to suggest two distinct groups of three and a separate single figure.

The figures were cut as free standing flat forms from a

³⁴ Cf. Martini, "Prodigan Son," Plate 36. Valentiner, Origins of Modern Sculpture.

³⁵ Eugene Raskin, Architecturally Speaking.

³⁶ Cf. Plate 14. Giacometti, "City Square."

sheet of wax. Against this flat plane a second sheet of wax was molded to give volume to the forms. Surfaces were modelled into various convex and concave planes suggestive of garments and, in some instances, the anatomical structure beneath them. Edges of garments were cut horizontally or in diagonal curves to direct the eye of the observer across the forms. The mantels on three figures, seen from the back, form three similar shapes emphasized by an upward sweeping diagonal line beginning in a sharp curve on the central figure and repeated to a lesser degree on the alternate figures.³⁷ At both the front and the back of all of the figures waistbands and hems of garments were placed at differing levels to create a changing pattern of rectangular volumes and voids.

Various devices have been employed to create the illusion of a solemn group, stolid and impassive. Bodies stand straight and unbending on narrow straight pillars of legs. Arms hang vertically at the sides. Heads, set squarely on broad or massive shoulder ridge, are erect and unmoving. Eyes stare into space.

In contrast, the separate female figure stands erect but slightly bowed, with arms hugging the body, head thrust forward, eyes focussed in a downward solemn stare. A slight tenseness of the body is suggested in the deep curve across the shoulder blades.

Although essentially a static composition, some tension has been created by the juxta-position of figures on the floor plane.

³⁷ See Plate 13.



Plate 13

"ONE AND OTHERS"

The three figures at the back form a backdrop which angles forward gently toward the right. The group of three on the left have been arranged to complement the total design, serving as an enclosure and creating by their placement spatial depth and areas of light and shadow. The single female figure, at an angle to the group, faces slightly inward rather than away from the group. In turn, the female figure in the left-hand group faces directly toward the isolated one implying some emotional interplay or cross-current.³⁸

In designing this sculptural group no attempt has been made

³⁸ See Plate 12.

to tell a story or point out a moral. It is an expression of a human relationship (group to individual; individual to group) broad enough in scope that the observer may bring to it his own interpretation. To one person, the sculpture may suggest the stoicism of grief or loss; to another, the silent condemnation of judge and judged.

In spite of the smallness of size this sculpture represents the attempt to create a work of art of dignity and the affect of monumentality. To achieve this, careful consideration was given to scale relationship and clarity of form.



Giacometti

Plate 14

"City Square"

THEME III

Man: a Part of an Intimate Group



Plate 15

SCULPTURE III "VIA ALLEGRO"

This work depicts three people walking together,
absorbed in conversation.

Man: A Part of an Intimate Group

Observations. Intimate groups are many and varied; the result of friendship, common occupation, mutual interests, shared diversions and other factors.

The family forms one kind of intimate group, a primary one, tied together by bonds of blood, filial affection, close association, common values. Within this group there are widely varying relationships; husband to wife, father to family, mother to child, sibling to sibling. In a family group one might expect to find more elements of similarity than dissimilarity.³⁹

Generally speaking, the intimate group is an inner-focused, inner-directed entity.⁴⁰ The smaller the size of this entity the more highly concentrated the relationships among or between its members. Compare conversation groups of differing sizes in a theatre lobby, at the card table or in a restaurant. Note the direct interplay between two people; the close-knit character of couples absorbed in one another. A third person joining this most intimate of groups adds a new dimension, widening and expanding the relationship, thus changing its character.

To the outside observer, an intimate group, absorbed in its own particular activity at times appears to think and act as one. It sometimes seems as if an invisible wall or screen surrounds such a group through which one must pass to gain entry. This is

³⁹ Cf. Plate 18. Fritz Koenig, Maternitas, 1958

⁴⁰ Cf. Plate 19. Couziun, Untitled, 1917.

in direct contrast to the impersonal quality of the crowd or multitude where it might be possible to join or blend into the fringes of people without being appreciably noticed.

Sculpture III "VIA ALLEGRO"

Description and Method. This work attempts to describe one aspect of the intimate group; three human beings walking together absorbed in conversation. It was developed directly in wax and completed in bronze using the method described under Technical Processes.

To capture the quality of the intimate group this sculpture was conceived as a single free-flowing form suggestive of three figures moving briskly along. Heads, arms, legs and garments were cut as one unit from a single sheet of wax moulded from beneath to form a rounding surface suggesting bodies. This was then spliced at the outer upper edge and brought around to the back of each outer figure and again moulded and pulled to simulate body volume and the billowing and flow of garments. The back of the central figure was cut and fitted as a separate piece with a sloping shoulder plane added to tie the form to similar shoulder planes on the other two figures.

A complete volume was thus formed whose undulating front surface carried the eye across and around the forms in an unbroken movement countered and stopped at the back by the inward directed lines of the central back panel or figure.

Legs, pipe-like in shape were completed or added to give the effect of a long easy stride, balance the weight distribution and

emphasize lines and edges of volumes. Heads, arms and hands were treated in a semi-abstract rather than a literal manner with emphasis on gesture and angle to lend life and vigour to each form. The heads, similar in style, turn toward one another in the attitude of speaker and listener; are erect to suggest alertness. The arms extend outward from the body in two sharp right angles turned so as to suggest animated gesticulation and at the same time carry the eye of the observer from head to head and back again in an enclosed space. The thumb and palms of the hands are open or angular repeating this same quality. All function together as the focal point of the sculpture, suggesting the energy or vitality of an animated conversation.



Plate 16



Plate 17



Koenig, Fritz Plate 18 "Maternitas"



Couziun, W. Plate 19 No Title-1917

THEME IV

Man: Alone with his Environment



Plate 19a

SCULPTURE IV "ACCORD"

This work suggests the idea of a human being responding to his environment with warmth and acceptance.

Man: Alone with His Environment

Observations. Man alone with his environment relates himself to nature or natural forces. He accepts or rejects; is contemplative, tense; gratified, frustrated; joyful, depressed; active, passive; ad infinitum.

The sculptor, being artist not psychologist, must rely upon his own experiences in making any statement about the qualities of aloneness.⁴¹ He draws upon his own emotional reaction to his environment and his associations with things that have shaped his own character.⁴² The degree to which he is able to project his sense of selfhood is in direct proportion to the degree to which he will be most successful in achieving universality. He must materialize his ideas in such a manner that the observer feels an empathic identification when experiencing his sculpture.

He may utilize an impressionistic, though literal, manner as Auguste Rodin has done in "Squatting Woman";⁴³ abstracted

⁴¹ Norbert Lynton, Kenneth Armitage. Artist's statement: "A sculptor using figures reveals a little of his private human self as well as his aesthetic inclinations. We are all involved in ceaseless and ruthless scrutiny of others, and become adept in making automatic split-second assessments of everybody we meet - being repelled or attracted, and interpreting every variation of shape as indications of character."

⁴² Barbara Hepworth, Carvings and Drawings, 1952. "From the sculptor's point of view, one must either be the spectator of the object or the object itself. For a few years I became the object - I was the figure in the landscape and every sculpture contained to a greater or less degree the everchanging forms and contours embodying my own response to a given position in that landscape."

⁴³ Cf. Plate 21. Rodin, August, "Squatting Woman," 1882. Otterloo Sculpture Garden, Holland.

organic masses as Jacques Lipchitz has done in "The Rescue"⁴⁴ or associational devices such as mass, texture, choice of material aimed at the level of the subconscious, such as one finds in Julio Gonzalez's "Woman Combing Her Hair."⁴⁵

Whatever his method, there should be in the final form some expression of the living organism beyond mere surface description. The sculptured form, a human figure in this instance, represents more than an object to be idealized by Maillol, purified by Arp⁴⁶ or Brancusi, or dissected by Picasso or Archipenko.⁴⁷

Sculpture IV "ACCORD"

Description and Method. This work attempts to express the idea of a human being responding to his environment with warmth and acceptance. It was done by means of the cire perdue method of casting in bronze explained in detail under Technical Processes.

Bronze, in its molten state is a swift flowing liquid which spills into the casting mold and solidifies in a matter of seconds. To capture this same uninterrupted fluid quality in the figure, the entire area of front, arms, legs, head and torso were cut as one from a single sheet of wax. This was folded in a swinging outward thrust around the back to the right side to form the volume of skirt and the major portion of the torso of

⁴⁴Cf. Plate 22. Jacques Lipchitz, Die Rettung ("The Rescue").

⁴⁵A. C. Ritchie, Sculpture of the Twentieth Century, 1952. The Object and the Subconscious: the Surrealists. p. 29, See also p. 167.

⁴⁶Cf. Plate 23. Arp, "Mediterrane Grupe," 1941-43.

⁴⁷A. C. Ritchie, Ibid., pp. 13-31.



Plate 20



Plate 21

Rodin, A.

"Squatting Woman"



Lipchitz, J.

Plate 22

"The Rescue"



Arp, Hans

Plate 23

"Mediterranean Grupe"

TECHNICAL PROCESSES

Wax Modelling

Materials. The wax mixture used in making all of the models for the bronze sculpture was one supplied by the foundry department of the Akademie der Bildenden Künste in Munich, Germany. It consisted of the following ingredients:

Beeswax	1 part
Colophonium	1 part
Parafin	1 part
Lamp black	(enough to blacken the mix)

These were melted together and poured to form a sheet approximately $\frac{1}{8}$ to $\frac{3}{16}$ inches in thickness.⁴⁹

The modelling tools employed were two steel knives with serrated edge, a set of cuticle tools, a sculptor's metal plaster tool and a variety of small picks.

A small alcohol lamp was used to heat these tools.

Method. A number of different methods were used during the modelling process. To join two sheets of wax, both edges were cross-hatched with a knife, warmed slightly and pressed together. The flat surface of a hot metal tool was applied across the seam and on the under side. The two parts were compressed until the

⁴⁹J. C. Rich, The Materials and Methods of Sculpture. For a description of these ingredients and their properties, and other wax mixtures, see pp. 156-158.

wax cooled and solidified. To complete the cooling process more quickly, the section was plunged into cold water.

In minor cracks or openings, hot wax was dripped into the crevice and smoothed off with the edge of a metal tool. The resulting seam lacked the strength of the first method described.

The entire sheet of wax was warmed when necessary to keep it pliable and less prone to brittleness and breakage. In turn, when the modelling was completed, the sculpture was plunged into a vat of cold water to retain its shape.

The general technique used was that of direct building in wax as described previously.⁵⁰ A temporary core or armature of cotton gauze was used during some of the early stages of work. Small wooden sticks about 1/16 inch in diameter and six inches long were used when needed as a core for thin or delicate forms such as arms or legs.

The smoothing and polishing of seams and surfaces was done with fine sandpaper moistened with benzine.

Bronze Casting

Method. All of the pieces were cast by the cire perdue or lost-wax process. It is a method of making a one-piece mold over a wax model, melting the wax out, and filling the mold with molten metal.⁵¹ The "true" or direct method was used which can produce only one cast from a model. In this process, the

⁵⁰Jules Struppeck, The Creation of Sculpture, pp. 212-216.

⁵¹Ibid., p. 211.

the figure. A triangular shape was cut and attached between the base of the neck and the shoulder blades. This delineated the shoulder and back planes at the same time forming contrasting areas of light and shade at angles to one another.

The body mass was fashioned from the inside to form ridges and depressions of backbone and flesh, suggestions of breast-bone and rib-cage, thigh and fabric. It was further modelled to state the interlocking of torso and pelvic saddle. The legs and feet were moulded as slender elongated forms. The arms, extending at right angles from the body with outstretched palms, were exaggerated in length to emphasize their relatively important function in the expression of an open gesture of acceptance.⁴⁸

The head was modelled as a solid form directed not into space but at a slightly sideward and downward angle as if in active response to an object or thing.

A slight contraposto was used to give the whole form movement and vitality. The head turned to one side, the lifted foot, the bent knees suggest the intent posture associated with an active rather than passive relationship with the surroundings.

The delicacy of face, arms and hands, youthfulness of body, slight spring of the stance all serve to suggest buoyancy, - a feeling of delight or pleasant surprise. The whole figure represents a summary of gestures of receptivity and acceptance.

⁴⁸ Valentiner, Origins of Modern Sculpture, p. 30. "The sculptor can make us believe in the real existence of his creation by exaggerating and accentuating certain elements..."

sculptor builds a model directly in wax⁵² as a hollow form or as a form completed over a core of investment material.⁵³ Rods of wax are attached to the model to form a pouring channel with gates and vents. This gating system is so planned that the molten metal will enter the cast through small channels or gates rather than falling through the spaces of the mold that form the cast. The vents provide spaces for the release of excess air and gases.

This structure is then covered with several coats of investment material followed by a thick wall of coarse lute to form a mold capable of withstanding the pressure of molten metal but porous enough to absorb some of the gases present.

This mold is heated and the wax, which represents the thickness of the metal, is allowed to run out, leaving a space. This heating process serves to dry out the mold also.

Bronze, an alloy of about 85 per cent copper, 5 per cent tin, 5 per cent zinc, and 5 per cent lead, is heated to a casting temperature of about 200 degrees F above the melting point,

⁵² Conversations with sculptors working in this same medium have revealed new techniques which are being used in both the midwest and western parts of the United States. Styrofoam, which can be purchased in large block-like shapes, makes a very acceptable substitute for wax as a meltable medium to form the initial shape or model. Wax can be added to this base material to extend forms and the styrofoam can be pressed and shaped by the use of a small torch or soldering iron. The particular quality of this material gives an interesting porous texture, or if sealed by heat in the initial modelling, a skin-like smoothness to the finished bronze sculpture.

⁵³ The Akademie der Bildenden Künste used the following investment ratio:

"mass"	3 parts
plaster	1 part
per cup of water	

skimmed, and poured into the mold until all of the channels are filled. After cooling, the outer coating of the mold is destroyed and the metal sculpture emerges. The runners are cut off and the whole piece chased or finished.⁵⁴

Finish. A bronze finish was requested for Sculptures I and II which retained some of the textural variations of the "fire skin" combined with a whitish green patina. The foundry technicians obtained this effect by a "quick pouring" of the molten bronze and an acid bath of Mercuric Chloride plus Copper Nitrate.

Similarly, Sculpture IV was given an acid bath of a mixture of Mercuric Chloride, Copper Sulphate and a little Liver of Sulphate (used sparingly) to give it blackish green patina.

Sculpture III was finished in a natural "unadulterated" bronze tone. This red bronze was selected in preference to a black finish also available at the Nicci Foundry in Rome.

⁵⁴ For a detailed description of the lost-wax process, see: Jules Struppeck, The Creation of Sculpture, pp. 211-237; and J. C. Rich, The Materials and Methods of Sculpture, pp. 135-141, 146-172.

SUMMARY

Biographical Data Pertinent to the Development
of the Sculpture

For some years, the author has been interested in the social and psychological manifestations of people in their relationships to one another. She has been employed as the Art Director in a large institution for the mentally ill. In this capacity she was keenly aware of the contrast between the changing relationships of people to one another and to their world. This was very apparent among the individuals with whom she worked and, so-called, normal individuals.

She was continually impressed by the anonymity of the long lines of patients walking in groups from building to building. These same trudging, expressionless columns breaking out, like a flowering plant, first, into individuals as they entered the door of the art room and, later, into positive individual personalities as each established a relationship of some sort with the author as the art therapist, their environment of the moment, i.e. the objects and things about them, or the other people in the room.

Many sessions in group therapy suggested ways in which groups grow and function, the natural selection of leadership, the core of common purpose, the roles of individuals within the group.

During numerous sketching sessions in advanced figure study at Kansas State University, again the author was aware of the unending variants in people's relationships as they played

together, walked together, talked together.

To implement some of these observations into a sculptured form was the task at hand. The author became immediately aware of a number of special problems directly related to designing a piece of sculpture with more than one figure, as she worked out a wax model of two people based on the theme of "separateness."⁵⁵

First, there must be more similarities than differences in the figures in order to keep a unity in the whole design. As an artistic expression, a common denominator was essential. Second, as the separate forms were unified, their relationships in space and to one another should have enough dynamic quality to offset any lack of variety in the forms.

On the basis of these observations and during the creative work other factors became important. In all of the sculptures, stress was given to groups rather than pairs of figures. It was felt that these offered more opportunity for subtle nuances of plastic and spatial organization.

Strong male-female delineation was avoided consciously in order to simplify and broaden the statement of relationships without the complication of sex connotations.

Sculpture IV is the figure of a young girl or woman - but

⁵⁵Curious as to whether this personal observation was perhaps a universal one, or an obvious one, I noted that the groups of figures in bas-relief from the Parthenon displayed in the Elgin Marbles Collection, groups of figures on the facades and bronze portals of many Romanesque churches and on the copies of facades of Indian temples in the Victoria and Albert Museum had been unified by the same means.

her femininity is one of delicacy rather than sensuality. Sculpture II suggests some maleness in the broad, squared-off shoulders of five of the figures; feminine characteristics in the breasts and hips of two.

Both the experimental work and the four pieces of bronze sculpture were developed and completed before the written body of the thesis was begun. At this point a retrospective period of formal and technical evaluation took place combined with a search for forms from other sculptors which might express the same idea; contrast with it; or amplify a particular point.

A decision was made to limit the majority of the illustrations to the twentieth century, thus narrowing the scope to a period somewhat similar in time and ideology, and avoiding the confusion of the multiplicity of styles encountered in any historical development. At the same time, recognition was made of the fact that the art of any given century is the product of its precursors.. Those elements of the past which were consistent or relevant to the problem were examined and given consideration in writing the thesis.

It is noteworthy that after the first conception of the idea of man in a group a conscious effort was made to search out examples of sculpture in museums, galleries, art publications and public and private buildings. There were numerous examples of group sculpture used architecturally in many countries and in almost every art period. Surprisingly enough, however, there were relatively few works of sculpture executed in the full-round

with more than one figure.⁵⁶ Until the twentieth century, heroic themes, religious themes and funereal themes seemed to predominate.

⁵⁶ At an extensive showing of free-standing, small bronzes of the Renaissance period exhibited in February, 1962 in Florence, Italy, only one group sculpture was to be found. The subject of this group was the three Graces.

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SCULPTURAL EXPRESSION
AS RELATED TO THE HUMAN FIGURE

by

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SCULPTURAL EXPRESSION AS RELATED TO THE HUMAN FIGURE

This thesis combines the creation of four pieces of bronze sculpture and a written exposition (including photographs) of the development and synthesis of their content and form. The subject matter in each sculpture is the human figure. The content and form of the sculpture is the expression of varying relationships of human beings to one another and to their environment.

The four bronzes are:

- I. "EXODUS" - an expression of man as part of a multitude.
- II. "ONE AND OTHERS" - an expression of man as separate from a group.
- III. "VIA ALLEGRO" - an expression of man as part of an intimate group.
- IV. "ACCORD" - an expression of the human being relating to his environment.

The written exposition presents a brief historical survey of the sculptured image of the human figure as it reflects man's changing role in society. Problems of form in sculpture, common to varying periods, are reviewed. A discussion of the preliminary considerations in the development of the creative work includes: the choice of material, method and size; an analysis of the creative act; and the description of four experimental works, separate from, and preliminary to, the final cast bronzes.

The main body of the written thesis describes the four pieces of bronze sculpture; the candidate's observations about the particular theme; and a minute description of the development of the form in relation to theme. A section on technical processes follows, which includes a description of the materials and methods used in the wax modelling and the bronze casting. A summary, giving biographical background pertinent to the sculpture, completes the exposition.